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PATENT & TRADEMARK OFFICE

Confirmation No.: 3589

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants:	Wollenberg et al.	Examiner: M. Wallenhorst
Serial No.:	10/699,508	Group: Art Unit 1743
Filing Date:	October 31, 2003	Docket No.: T-6298C (538-62)
For:	HIGH THROUGHPUT SCREENING METHODS FOR LUBRICATING OIL COMPOSITIONS	Dated: May 5, 2006

MAIL STOP APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPELLANTS' BRIEF

Sir:

Enclosed please find APPELLANTS' BRIEF.

Also enclosed is a check in the amount of $500.00 to cover the appeal fee.

If the enclosed check is insufficient for any reason or becomes detached, please charge the required fee under 37 C.F.R. § 1.17 to Deposit Account No. 50-3591. Also, in the event any additional extensions of time are required, please treat this paper as a petition to extend the time as required and charge Deposit Account No. 50-3591. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

Respectfully requested.

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Alexandria, VA 22313-1450

APPELLANTS' BRIEF

Sir:

In response to the final Office Action dated November 4, 2005 and the Advisory Action dated February 16, 2006, Applicants appeal pursuant to the Notice of Appeal filed on March 3, 2006 and received in the U.S. Patent and Trademark Office on March 6, 2006. Pursuant to 37 C.F.R. §41.37, one copy of this brief is submitted in connection with the appeal which has been taken herein.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postpaid in an envelope, addressed to the: MAIL STOP APPEAL BRIEF-PATENTS Commissioner for Patents, Alexandria, VA 22313-1450 on May 5, 2006.

Dated: May 5, 2006

Bridget Griffin

(1) REAL PARTY IN INTEREST

The real party in interest for this application is Chevron Oronite Company LLC.

(2) RELATED APPEALS AND INTERFERENCES

There are no other related appeals or interferences for this application.

(3) STATUS OF CLAIMS

Claims 1-23 are pending, stand rejected and are under appeal. All of these claims have been finally rejected and constitute the claims on appeal.

A copy of Claims 1-23 as pending is presented in the Appendix.

(4) STATUS OF AMENDMENTS

Appellants' claims were finally rejected in a final Office Action mailed November 4, 2005. Appellants submitted an Amendment on February 3, 2006 in response to the final Office Action. An Advisory Action was mailed on February 16, 2006 in which the Amendment was entered by the Examiner but considered to not place the application in condition for allowance.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

The invention of the appealed claims provides a high throughput method for screening lubricating oil compositions under program control (page 4, lines 2-4). The first step of the high throughput method comprises providing a plurality of different lubricating oil

composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles (page 4, lines 2-8 and page 6, line 1 through page 21, line 6 and Figure 1). The second step (step b) of the high throughput method comprises measuring the oxidation stability of each sample to provide oxidation stability data for each sample (page 4, lines 8 and 9 and page 23, line 5 through page 29, line 8 and Figure 1). The third step of the high throughput method comprises outputting the results of step (b) (page 4, lines 8 and 9 and page 29, line 9 through page 30, line 14).

The invention of the appealed claims also provides a system for screening lubricating oil composition samples under program control. The high throughput system comprises (a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive (page 4, lines 2-8 and page 6, line 1 through page 21, line 6 and Figure 1). The high throughput system further comprises a computer controller for selecting individual samples for testing (page 20, lines 12-21). The high throughput system further comprises receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples (page 23, line 5 through page 24, line 12 and Figure 2). The high throughput system further comprises means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller (page 23, line 5 through page 29, line 8).

(6) GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection presented in this appeal are the following:

(1) Claims 1-6, 10 and 15-19 stand rejected under 35 U.S.C. §103(a) as being obvious over Kolosov et al. U.S. Publication No. 2004/0123650 ("Kolosov et al.") in view of O'Rear U.S. Publication No. 2003/0100453 ("O'Rear") or Gatto U.S. Publication No. 2003/0171226 ("Gatto").

(2) Claim 9 stands rejected under 35 U.S.C. §103(a) as being obvious over Kolosov et al. in view of Perez et al. U.S. Patent No. 5,236,610 ("Perez et al.").

(3) Claims 7-8 and 20-21 under 35 U.S.C. §103(a) stand rejected under 35 U.S.C. §103(a) as being obvious over Kolosov et al. in view of O'Rear or Gatto and further in view of McFarland et al. U.S. Patent No. 6,541,271 ("McFarland et al.").

(4) Claims 11-14 stand rejected under 35 U.S.C. §103(a) as being obvious over Kolosov et al. in view of O'Rear or Gatto and further in view of Smrcka et al. European Patent No. 1,233,361 ("Smrcka et al.").

(5) Claims 22-23 stand rejected under 35 U.S.C. §103(a) as being obvious over Kolosov et al. in view of O'Rear or Gatto and further in view of Garr et al. U.S. Patent No. 5,993,662 ("Garr et al.").

(6) Claims 1-3, 6, 11-12, 15-18 and 21-23 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/779,422.

(7) Claims 1-3 and 10-14 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,529.

(8) Claims 1, 3, 10-18 and 22-23 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,507.

(9) Claims 1, 3, 15, 17 and 22 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,509.

(7) <u>GROUPING OF CLAIMS</u>

The claims on appeal, i.e., Claims 1-23, are grouped as follows:

(1) Claims 1-14; and

(2) Claims 15-23.

(8) <u>ARGUMENT</u>

A. The Combined References of Kolosov et al. and O'Rear or Gatto Fail to Establish the *Prima Facie* Obviousness of <u>the Method and System of Appealed Claims 1-6, 10 and 15-19</u>

1. <u>The Examiner's Position</u>

In the Final Office Action, the Examiner applied the references as follows:

> … [i]t is noted that the reference to Kolosov et al. teaches of the general analysis of a large number of diverse compounds and that the compounds analyzed can be lubricants having an additive therein. See paragraph nos. 0042-0043 in Kolosov et al. It is inherent that in a lubricating oil composition having an additive therein that the base

lubricant oil is present in a major amount while the additive is present in a lessor minor amount. Different lubricant compositions having additives therein are contained within test receptables in an array or combinatorial library. It is inherent that each of the test receptacles taught by Kolosov et al. contains a different lubricant composition since Kolozov et al. teach that the candidate samples in a combinatorial array or library differ from one another in a definable and predefined way, such as the amounts of components included within the composition, the types of additives included within the composition, etc.

* * *

Kolosov et al. also teach of measuring stability parameters of the different lubricant compositions such as thermal degradation parameters, aging characteristics, and chemical composition. Although a large number of different types of flowable samples are taught by Kolosov et al as being analyzed in a high throughput manner in a combinatorial library by measuring many different parameters, the fact remains that the disclosure of Kolosov et al does teach of the analysis of lubricant compositions having additives therein in a high throughput manner by placing many different types of the lubricant compositions in a plurality of receptacles, automatically moving the receptacles to locations for measurement of parameters and measuring many different parameters of the samples including those associated with the long-term stability of the compositions.

* * *

O'Rear teaches that the oxidation stability of a lubricant oil sample can be determined by exposing the sample to an oxidative atmosphere, and determining the time required for the sample to adsorb one liter of oxygen. See paragraph nos. 0032-0033 in O'Rear.

* * *

Gatto teaches of a method for determining the oxidation stability of a lubricant oil composition by measuring the deposits formed by the sample under high-temperature thin-film oxidation conditions. See paragraph no. 0065 in Gatto.

* * *

Although Kolosov et al. do not specifically teach of measuring oxidation stability parameters of the lubricant compositions, the secondary references to O'Rear and Gatto teach that it is common to measure the long-term stability of a lubricant composition having an additive therein by determining the oxidation stability of the composition.

2. <u>The Appellants Position</u>

Before showing how the Examiner's rejection of the appealed claims fails to make out a *prima facie* case of obviousness, a statement of the legal principles relating to the

establishment of *prima facie* obviousness would be worthwhile. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992) succinctly sets forth the principles as follows:

> The *prima facie* case is a procedural tool of patent examination, allocating the burdens of going forward as between examiner and applicant. *In re Spada*, 911 F.2d 705, 707 n.3, 15 USPQ2d 1655, 1657 n.3 (Fed. Cir. 1990). The term "*prima facie* case" refers only to the initial examination step. *In re Piasecki*, 745 F.2d 1468, 1572, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). As discussed in *In re Piasecki*, the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant.
>
> After evidence or argument is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument. *See In re Spada, supra*; *In re Corkill*, 771 F.2d 1496, 1500, 226 USPQ 1005, 1008 (Fed. Cir. 1985); *In re Caveny*, 761 F.2d 671, 674, 226 USPQ 1, 3 (Fed. Cir. 1985); *In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984).
>
> If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent. *See In re Grabiak*, 769 F.2d 729, 733, 226 USPQ 870, 873 (Fed. Cir. 1985); *In re Rinehart, supra.*

Oetiker and the cited precedents are clear on this: if it can be shown that the Examiner has failed to make out a *prima facie* case of obviousness, the final rejection herein must be reversed.

It is also well established by the Federal Circuit that obviousness cannot be established by simply combining the teachings of the prior art to produce the claimed invention absent some teaching, suggestion or incentive supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

The U.S. Patent and Trademark Office guidelines for *prima facie* obviousness are set forth in MPEP 2142 (Legal Concept of *Prima Facie* Obviousness) as follows:

> ...First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

These three criteria are not satisfied by the combination of Kolosov et al. with O'Rear or Gatto or, for that matter, any of the combination of references cited by the Examiner for at least the following reasons.

As acknowledged by the Examiner in the Final Office Action, nowhere does Kolosov et al. disclose or suggest a high throughput method for screening lubricating oil compositions, under program control, comprising, *inter alia*, "measuring the oxidation stability of each sample to provide oxidation stability data for each sample" as recited in appealed Claim 1. Nor, as also acknowledged by the Examiner, does Kolosov et al. disclose or suggest a system for screening lubricating oil composition samples, under program control, comprising, *inter alia*, "a means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller" as recited in appealed Claim 15.

Rather, Kolosov et al. merely disclose a system and method for screening a library of a multitude of genera of material samples for rheological properties utilizing a large number of broad tests. Exemplary material disclosed in Kolosov et al. are commercial products, which may be tested or may include ingredients that may be tested according to the present invention and include pharmaceuticals, coatings, cosmetics, adhesives, inks, foods, crop agents, detergents,

protective agents, lubricants and the like. Kolosov et al. further disclose that the invention has particular utility in connection with the screening of a number of different material forms including, for example, gels, oils, solvents, greases, creams, foams and other whipped materials, ointments, pastes, powders, films, particles, bulk materials, dispersions, suspensions, emulsions or the like.

Thus, not only does Kolosov et al. fail to disclose or suggest a high throughput method for screening lubricating oil compositions, under program control, comprising, *inter alia*, measuring the oxidation stability of each sample to provide oxidation stability data for each sample, but also fails to disclose or suggest the step of providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles, as recited in appealed Claim 1. Additionally, not only does Kolosov et al. fail to disclose or suggest a system for screening lubricating oil composition samples, under program control, employing a means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller but also fails to disclose or suggest a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, as recited in appealed Claim 15.

The Examiner's alleges that it is inherent that in a lubricant composition having an additive therein that the base lubricant oil is present in a major amount while the additive is present in a lesser minor amount. This wholly unsupported assertion cannot possibly provide a

basis for this rejection. The Examiner refuses to acknowledge that lubricating oil compositions do not have to contain a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive. In point of fact, a lubricating oil composition can be a concentrate that contains a major amount of a lubricating oil composition and a minor amount of base oil of lubricating viscosity as a diluent for the concentrate. The Examiner also refuses to acknowledge that a lubricant can be a grease, jelly, e.g., K-Y jelly or petroleum jelly, as well as powders, e.g., dry graphite, PTFE, etc., formulated with water and can be used as is such that all lubricants may not even require an additive. Besides, it is well established that the concept of inherency has no place in determinations of obviousness under section 103, as opposed to anticipation under section 102, because, as stated in *Jones v. Hardy*, 727 F.2d 1524, 1529, 220 USPQ 1021, 1025 (Fed. Cir. 1984), "it confuses anticipation by inherency, i.e., lack of novelty, with obviousness, which, though anticipation is the epitome of obviousness, are separate and distinct concepts." See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775-76 (Fed. Cir. 1983). Accordingly, the Examiner's position is untenable and in contrast to Federal Circuit precedent.

O'Rear fails to cure the deficiencies of Kolosov et al. Specifically, nowhere does O'Rear disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step

(b) as presently recited in appealed Claim 1. Nor does O'Rear disclose or suggest a system for screening lubricating oil composition samples, under program control, comprising (a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive; (b) a computer controller for selecting individual samples for testing; (c) receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples; (d) means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller" as presently recited in appealed Claim 15.

Rather, O'Rear discloses a blend of synthetic and non-synthetic lube base oils wherein the lube base oil product has a greater stability in the absence of additives than the stability of the synthetic lube base oil and has a greater stability in the presence of additives than the non-synthetic lube base oil. O'Rear further discloses that it has remarkably been discovered that these lube base oils can be prepared by blending lube base oils that have poor Oxidator A stabilities but good Oxidator BN stabilities with lube base oils that have the opposite properties such as good Oxidator A stabilities but poor Oxidator BN stabilities. O'Rear goes on to state that surprisingly, the Oxidator A and BN values do not blend linearly, and lube base oils made by blending these components have properties superior to either individual base oil, which were manually evaluated in the Oxidator A and BN tests in the examples. O'Rear therefore provides a *non-automatic* means to measure the oxidation properties of lubricating oil compositions.

Gatto also fails to cure the foregoing deficiencies of Kolosov et al. Specifically, nowhere does Gatto disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1. Nor does Gatto disclose or suggest suggest a system for screening lubricating oil composition samples, under program control, comprising (a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive; (b) a computer controller for selecting individual samples for testing; (c) receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples; (d) means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller" as presently recited in appealed Claim 15.

Rather, Gatto discloses unique organomolybdenum compositions, which are especially useful as lubricant additives. Gatto further discloses adding the organomolybdenum additives of Examples 1-9 therein in a base oil and manually testing the lubricating oil compositions using a Caterpillar Micro-Oxidation test. Gatto therefore also provides a *non-automatic* means to measure the oxidation properties of lubricating oil compositions.

Most, if not all, inventions arise from a combination of old elements. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon,* 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Appellants employ a high throughput method and system operated under program control, i.e., one that is automatic, to screen lubricating oil compositions for the oxidation stability of each sample to provide oxidation stability data. There is no remote suggestion, motivation or even a hint of this in O'Rear or Gatto. Instead, both O'Rear or Gatto merely teach a lubricating oil composition can be tested for oxidation properties via a non-automated test. However, the presently claimed invention, as set forth in the present claims, employs an automatic high throughput method and system to rapidly analyze and screen a diverse number of lubricating oil compositions.

The Examiner alleges that it would have been obvious to one of ordinary skill in the art at the time of the invention to screen the lubricant/additive compositions in the combinatorial array taught by Kolosov et al. for oxidation stability since Kolosov et al. teach that the plurality of samples in the array are screened for various material characteristics, and both O'Rear and Gatto teach that it is common to screen lubricating oil compositions for their oxidation stability by either determining the time required for a lubricant sample to consume a

predetermined amount of oxygen or by measuring the amount of deposits formed by a lubricant sample exposed to oxidation reaction conditions. However, as the court pointed out in *In re Lee*, 277 F.3d 1338, 1342-43, 61 USPQ2d 1430, 1433-34 (CAFC 2002), there must be some teaching, motivation or suggestion to select and combine references relied upon as evidence of obviousness. As is the case here, the Examiner has utterly failed to make out a case of where O'Rear or Gatto provides such teaching, motivation or suggestion of the automatic method and system presently set forth in the appealed claims.

As stated above, O'Rear and Gatto are both directed to a *non-automatic* means to test a lubricating oil composition for its oxidation properties and at no point provides any such disclosure, motivation or even a suggestion of an *automatic* a high throughput method and system operated under program control, i.e., one that is automatic, to screen lubricating oil compositions for the oxidation stability of each sample to provide oxidation stability data. As such, one skilled in the art would not be motivated by the O'Rear or Gatto disclosures to modify the systems of Kolosov et al. and arrive at the presently claimed method and system. Accordingly, the Examiner has failed to present a *prima facie* case of obviousness and shift the burden of going forward to the appellants, *In re Grabiak*, 769 F.2d 729, 226 USPQ 870 (Fed. Cir. 1985), by failing to establish the motivation to combine Kolosov et al. with O'Rear or Gatto. Thus, it is respectfully submitted that appealed Claims 1-6, 10 and 15-19 are nonobvious over the cited references and the rejection should be withdrawn.

B. <u>The Combined References of Kolosov et al. and Perez et al. Fail to Establish the *Prima Facie* Obviousness of the Method of Appealed Claim 9</u>

The deficiencies of Kolosov et al. discussed above with respect to the previous rejection of appealed Claim 1, from which appealed Claim 9 depends, apply with equal force to this rejection.

Perez et al. do not cure the above-noted deficiencies of Kolosov et al. Specifically, nowhere does Perez et al. disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1.

Rather, Perez et al. disclose stable high temperature liquid lubricant blends and antioxidant additives. Perez et al. further disclose two differential scanning calorimetry methods for studying oxidation stability, both of which are non-automated. Thus, there is absolutely nothing in Perez et al. that would motivate one skilled in the art to modify the method of Kolosov et al. and arrive at the presently claimed method for screening a plurality of lubricating oil composition samples, under program control, by measuring the oxidation stability of each sample and outputting the results. As such, the Examiner has utterly failed to establish the motivation combine to Kolosov et al. and Perez et al. to arrive at Appellants' invention. Accordingly, the Examiner has improperly examined the claims in a piecemeal fashion, which is contrary to the

standard expressed in MPEP 2142 and in Federal Circuit precedent.

Since Kolosov et al., alone or in combination with Perez et al., do not disclose or suggest a high throughput method for screening lubricating oil compositions, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1, from which appealed Claim 9 depends, appealed Claim 9 is nonobvious, and therefore patentable, over Kolosov et al. and Perez et al. and the rejection should be withdrawn.

C. The Combined References of Kolosov et al., O'Rear, Gatto and McFarland et al. Fail to Establish the *Prima Facie* Obviousness of the Method and System of Appealed Claims 7, 8, 20 and 21

The deficiencies of Kolosov et al., O'Rear and Gatto discussed above with respect to the previous rejection of appealed Claims 1 and 15, from which appealed Claims 7, 8, 20 and 21 depend, apply with equal force to this rejection.

McFarland et al. do not cure the above-noted deficiencies of Kolosov et al., O'Rear and Gatto. Specifically, nowhere does McFarland et al. disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at

least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1. Nor does McFarland et al. disclose or suggest a system for screening lubricating oil composition samples, under program control, comprising (a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive; (b) a computer controller for selecting individual samples for testing; (c) receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples; (d) means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller" as presently recited in appealed Claim 15.

Rather, McFarland et al. merely disclose a method and apparatus for characterizing liquids, dissolved organic or inorganic molecules, covalent network solids, ionic solids and molecular solids utilizing thermal imaging and infrared spectroscopic imaging. Nothing in McFarland et al. provides any suggestion, motivation or even a hint of a high throughput method and system for screening a plurality of lubricating oil composition samples, under program control, by measuring the oxidation stability of each sample and outputting the results. Thus, nothing in McFarland et al. would lead one skilled in the art to modify the system and method of Kolosov et al. in view of O'Rear or Gatto by looking to the disclosure of McFarland et al. and arrive at the claimed high throughput method and system for screening

lubricating oil composition, under program control, by measuring the oxidation stability of each sample and outputting the results.

Since Kolosov et al. and O'Rear or Gatto, alone or in combination with McFarland et al., do not disclose or suggest the presently claimed invention, appealed Claims 7, 8, 20 and 21 are believed to be nonobvious over Kolosov et al. in view of O'Rear or Gatto and McFarland et al. and the rejection should be withdrawn.

D. The Combined References of Kolosov et al., O'Rear, Gatto and Smrcka et al. Fail to Establish the *Prima Facie* Obviousness of the Method of Appealed Claims 11-14

The deficiencies of Kolosov et al., O'Rear and Gatto discussed above with respect to the previous rejection of appealed Claim 1, from which appealed Claims 11-14 depend, apply with equal force to this rejection.

Smrcka et al. do not cure and is not cited as curing the above-noted deficiencies of Kolosov et al., O'Rear or Gatto. Specifically, nowhere does Smrcka et al. disclose or suggest a high throughput method for screening lubricating oil composition samples, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1. Rather, Smrcka et al. is merely cited for its disclosure of storing test results in a data carrier.

Since Kolosov et al. in view of O'Rear or Gatto, alone or in combination with Smrcka et al., do not disclose or suggest a high throughput method for screening lubricating oil compositions, under program control, comprising (a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles; (b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and, (c) outputting the results of step (b) as presently recited in appealed Claim 1, from which appealed Claims 11-14 depend, appealed Claims 11-14 are nonobvious, and therefore patentable, over Kolosov et al., O'Rear, Gatto and Smrcka et al. and the rejection should be withdrawn.

E. The Combined References of Kolosov et al., O'Rear, Gatto and Garr et al. Fail to Establish the *Prima Facie* Obviousness of the Method of Appealed Claims 22 and 23

The deficiencies of Kolosov et al., O'Rear and Gatto discussed above with respect to the previous rejection of appealed Claim 15, from which appealed Claims 22-23 depend, apply with equal force to this rejection.

Garr et al. do not cure the above-noted deficiencies of Kolosov et al., O'Rear and Gatto. Specifically, nowhere does Garr et al. disclose or suggest a system for screening lubricating oil composition samples, under program control, comprising (a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive; (b) a computer controller for selecting individual samples for testing; (c)

receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples; (d) means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller" as recited in appealed Claim 15.

Rather, Garr et al. is simply cited for the disclosure of employing a bar code to identify individual containers. Nothing in Garr et al. provides any suggestion, motivation or even a hint of a high throughput system for screening a plurality of lubricating oil composition samples, under program control, by measuring the oxidation stability of each sample and outputting the results. Thus, nothing in Garr et al. would lead one skilled in the art to modify the system and method of Kolosov et al. in view of O'Rear or Gatto by looking to the disclosure of Garr et al. and arrive at the claimed high throughput method and system for screening lubricating oil composition, under program control, by measuring the oxidation stability of each sample and outputting the results.

Since Kolosov et al. and O'Rear or Gatto, alone or in combination with Garr et al., do not disclose or suggest the presently claimed invention, appealed Claims 22 and 23 are believed to be nonobvious, and therefore patentable, over Kolosov et al. in view of O'Rear or Gatto and Garr et al. and the rejection should be withdrawn.

F. <u>The Provisional Rejections Under the Judicially Created Doctrine of Obviousness-type Double Patenting</u>

The following provisional rejections under the judicially created doctrine of obviousness-type double patenting have been made:

Claims 1-3, 6, 11-12, 15-18 and 21-23 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/779,422;

Claims 1-3 and 10-14 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,529;

Claims 1, 3, 10-18 and 22-23 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,507; and

Claims 1, 3, 15, 17 and 22 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Application No. 10/699,509.

Upon resolution of all outstanding issues remaining in this application, Appellants will submit a Terminal Disclaimer to obviate the provisional rejections.

G. CONCLUSION

For the foregoing reasons and for all of the reasons of record, it is submitted that appealed Claims 1-23 are patentable over the prior art relied upon by the Examiner. Reversal of the final rejections by the Board is therefore believed to be warranted, such being respectfully requested.

Respectfully submitted,

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(9) CLAIMS APPENDIX

1. A high throughput method for screening lubricating oil compositions, under program control, comprising:

(a) providing a plurality of different lubricating oil composition samples comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive, each sample being in a respective one of a plurality of test receptacles;

(b) measuring the oxidation stability of each sample to provide oxidation stability data for each sample; and,

(c) outputting the results of step (b).

2. The method of claim 1, wherein the base oil is a natural or synthetic oil.

3. The method of claim 1, wherein the lubricating oil additive is selected from the group consisting of antioxidants, anti-wear agents, detergents, rust inhibitors, dehazing agents, demulsifying agents, metal deactivating agents, friction modifiers, pour point depressants, antifoaming agents, co-solvents, package compatibilisers, corrosion-inhibitors, ashless dispersants, dyes, extreme pressure agents and mixtures thereof.

4. The method of claim 1, wherein the step of measuring the oxidation stability of each sample comprises exposing the sample to oxygen at a predetermined temperature for a predetermined time period and determining the amount of oxygen consumed by the sample.

5. The method of claim 1, wherein the step of measuring the oxidation stability of each sample comprises exposing the sample to a predetermined amount of oxygen at a predetermined temperature for a predetermined time period and determining the amount of time required for the sample to consume the predetermined amount of oxygen.

6. The method of claim 1, wherein the step of measuring the oxidation stability of each sample comprises subjecting the sample to oxidation reaction conditions in the presence of a substrate and determining the amount of deposit formed on the substrate after a predetermined period of reaction time.

7. The method of claim 1, wherein the step of measuring the oxidation stability of each sample comprises using infrared spectroscopy.

8. The method of claim 7, wherein the infrared spectroscopy is Fourier-transform infrared spectroscopy (FTIR).

9. The method of claim 1, wherein the step of measuring the oxidation stability of each sample is determined by differential scanning calorimetry.

10. The method of claim 1, wherein in step (c) the results of step (b) for each sample are transmitted to a computer, wherein the computer compares the results with a predetermined value delimiting a failure or passing of the results, and the computer identifies failed samples to preclude further testing of the failed samples.

11. The method of claim 1, wherein the step of outputting comprises storing the results of step (b) on a data carrier.

12. The method of claim 1, further comprising the step of using the results of step (b) as a basis for obtaining a result of further calculations.

13. The method of claim 11, further comprising the step of transmitting the results of step (b) to a data carrier at a remote location.

14. The method of claim 12, further comprising the step of transmitting the results of further calculations to a remote location.

15. A system for screening lubricating oil composition samples, under program control, comprising:

a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (i) a major amount of at least one base oil of lubricating viscosity and (ii) a minor amount of at least one lubricating oil additive;

b) a computer controller for selecting individual samples for testing;

c) receptacle moving means responsive to instructions from the computer controller for individually moving the selected samples to a testing station for measuring oxidation stability of the selected samples;

d) means for measuring the oxidation stability of the selected samples to obtain oxidation stability data and for transferring the oxidation stability data to the computer controller.

16. The system of claim 15, wherein the receptacle moving means comprises a movable carriage.

17. The system of claim 15, wherein the receptacle moving means comprises a robotic assembly having a movable arm for grasping and moving a selected individual receptacle.

18. The system of claim 15, wherein the receptacle moving means comprises means for agitating the test receptacles.

19. The system of claim 15 wherein the means for measuring oxidation stability comprises means for measuring the consumption of oxygen of the selected samples.

20. The system of claim 15 wherein the means for measuring oxygen stability comprises means for measuring deposit formation on a transparent glass substrate resulting from oxidation of the selected samples.

21. The system of claim 20 wherein the means for measuring deposit formation includes a light source and a photocell aligned with the light source.

22. The system of claim 15 wherein each test receptacle has a bar code affixed to an outer surface thereof.

23. The system of claim 22 further comprising a bar code reader.